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IS 680 (1993): Textiles - Cloth, barathea [TXD 4: Wool and Wool Products]



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“Knowledge is such a treasure which cannot be stolen”

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IS 680 : 1993
(Reaffirmed 2003)

भारतीय मानक
वस्त्रादि — बरथिया कपड़ा — विशिष्ट
(तीसरा पुनरीक्षण)

Indian Standard

TEXTILES — CLOTH, BARATHEA — SPECIFICATION
(*Third Revision*)

UDC 677.31-074

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Price Group 2

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Wool and Wool Products Sectional Committee had been approved by Textile Division Council.

The cloth covered by this standard is intended for use as dress material by army (drab shade) and air force (blue grey shade).

This standard has been revised in order to modify the constructional particulars of the cloth to give better breathing properties and woollen feeling and also to modify the moth proofing requirement in line with the present practices in the industry and trade.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — CLOTH, BARATHEA — SPECIFICATION

(Third Revision)

1 SCOPE

1.1 This standard prescribes the constructional particulars and other requirements of cloth, baratheia intended for use as dress material.

1.2 This standard does not specify the indeterminable characteristics like general appearance, feel, finish and shade of cloth (*see also* 6).

2 REFERENCES

The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 TERMINOLOGY

For the purpose of this standard, the definitions as given in IS 11206 : 1984 shall apply.

4 MANUFACTURE

4.1 The particulars regarding the grade of wool and polyester/polyamide fibres, count of yarn and finish for the manufacture of cloth are given in Table 1. The approximate count of yarns are given for guidance only.

4.2 Cloth

The cloth shall be clean scoured and free from grease, soap, filling or any other admixture which might give fictitious mass, substance or firmness. The cloth shall be uniformly woven with firm selvages.

4.2.1 *Mothproofing*

If required by the buyer the cloth shall be rendered

mothproof by suitable chemicals as per IS 11662 : 1986, which will not have toxic effect on human body. The manufacturer shall declare the mothproofing chemicals used, the minimum residual content and the method of test for determining the same.

4.2.1.1 The amount of preservatives used shall be determined by the methods given in IS 3522 (Part 3) : 1983.

4.2.2 *Freedom from Defects*

The cloth when visually examined both against light and on a surface shall not have more than one objectionable flaw per 8 m length. The objectionable flaws shall be those which strike immediately the eyes of the person examining the cloth and shall be deemed to include:

- a) missing ends and picks;
- b) floats;
- c) cuts and holes;
- d) stains;
- e) weft bars and warp section marks;
- f) big slubs, knots and specks;
- g) dyeing defects (streaks, patches, etc); and
- h) thick and thin places.

4.2.2.1 All objectionable flaws shall be marked by means of a thread sewn in the selvage opposite the flaw, and an allowance of 10 cm shall be given for each such flaw. Only one selvage shall be used for tagging.

4.2.2.2 A reference may be made to IS 4125 : 1987 for details for these defects.

Table 1 Manufacturing Particulars of Cloth, Baratheia
(Clause 4.1)

Fineness/Grade of Wool Tops	Approximate Count of Basic Yarn {Universal Count (Metric Count)}		Method of Dyeing	Type of Finish
	Warp	Weft		
(1)	(3)	(4)	(4)	(5)
64s	30 tex × 2 (Nm 34/2)	30 tex × 2 (Nm 34/2)	Stock dyeing / Piece dyeing	Clear Cut

NOTES

1 Material other than wool fibres up to 5% may be used to provide a decorative or ornamentation effect, if agreed to between the buyer and the seller (*see* IS 1793 : 1973).

2 For determination of fineness grades of wool tops, a reference may be made to IS 5911 : 1977.

5 REQUIREMENTS

5.1 The constructional particulars of the cloth shall conform to those given in Table 2.

5.2 The other requirements of cloth shall conform to those given in Table 3.

6 SEALED SAMPLE

6.1 If, in order to illustrate or specify the general appearance, feel, shade and finish, etc, of cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

6.1.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

Table 2 Constructional Particulars of Great Coat Cloth
(Clause 5.1)

Ends/dm	Picks/dm	Mass	Breaking Load on 15 × 20 cm Strips, <i>Min</i>		Length (<i>see</i> Note)	Width (Exclusive of Selvedges), <i>Min</i>	Weave

NOTE — The number of short length pieces (measuring not less than 10 m) shall not exceed 5 percent of the total number of pieces in the lot.

Table 3 Requirements of Cloth, Barathea
(Clause 5.2)

SI No.	Characteristic	Requirement	Method of Test
(1)	(2)	(3)	(4)
1)	Relaxation shrinkage, percent, <i>Max</i> :		IS 665 : 1989
	a) Warpway	5.0	
	b) Weftway	4.0	
2)	Colour fastness to:		
	a) Light (see Note)	5 or better	IS 686 : 1985 or IS 2454 : 1985
	b) Washing		IS 3361 : 1979
	i) Change in colour of the test specimen	4 or better	
	ii) Staining on adjacent fabric	4 or better	
	c) Dry-cleaning		IS 4802 : 1988
	i) Change in colour of the test specimen	4 or better	
	ii) Staining of the solvent	4 or better	
3)	pH value of aqueous extract	5.0 to 7.0	IS 1390 : 1983 (Hot Method)

NOTES

1 In case of dispute, colour fastness to light shall be determined by the method prescribed in IS 686 : 1985.

2 The blend composition shall be as agreed to between the buyer and the seller subject to a maximum of 20 percent polyamide/polyester. However, the blend percentage shall be subjected to a tolerance of ±2.

7 MARKING

7.1 The cloth shall be marked with the following:

- Name of the material;
- 'Blend Composition' i.e. the percentage of wool and polyamide/polyester fibres;
- Indication of the source of manufacture;
- Month and year of manufacture; and
- Length and width of the piece.

7.1.1 The cloth may also be marked with the Standard Mark.

8 PACKING

8.1 The cloth shall be packed in bales or cases in conformity with the procedure laid down either in IS 32 : 1971 or in IS 741 : 1971 as required.

8.2 Alternatively, the cloth may also be packed according to details given in 8.2.1 when specifically agreed to between the buyer and the seller.

8.2.1 Each piece of cloth shall be suitably folded in a rectangular form or wrapped on cardboard or strawboard of suitable size and thickness. Each piece shall then be wrapped with polyethylene film of a minimum 50 microns thickness or alternatively high density polyethylene film of minimum 25 microns

thickness or polypropylene film of minimum 38 microns thickness. The edges of the film shall be properly sealed. Each piece may be tied with a twine at least at 2 places. Such pieces, in a suitable number, shall then be covered in polyethylene film, high modulus, high density polyethylene film or polypropylene film in a outer layer of heavy cee jute cloth (see IS 3751 : 1966) to form compact bales. The bales shall be made secure by cross hooping the steel strips at right angles to both the length and the width of the bale. The gross weight of the bale shall not normally exceed 40 kg.

9 SAMPLING

9.1 Lot

The quantity of cloth of same variety delivered to one buyer against one despatch note shall constitute a lot.

9.2 The conformity of a lot to the requirements of the standard shall be determined on the basis of the tests carried out on the sample selected from the lot.

9.3 Unless otherwise agreed to between the buyer and the seller, the number of pieces to be selected at random shall be in accordance with col 1 and 2 of Table 4. To ensure randomness of selection procedure given in IS 4905 : 1968 may be followed.

9.4 Criteria for Conformity

Characteristic	Number of Tests	Criteria for Conformity
Ends, picks, mass, width, visual defects and weave	According to col 2 of Table 4	Permissible number of non-conforming pieces not to exceed the corresponding number given in col 3 of Table 4.
Length	According to col 2 of Table 4	Length of each piece not to measure less than the specified, declared or marked length.
Breaking strength	According to col 4 of Table 4	$\bar{X} - 0.4R \geq \text{specified value}$
Relaxation shrinkage	do	$\bar{X} + 0.4R \leq \text{specified value}$
Blend composition, colour fastness ratings, moth-proofing and pH value of aqueous extract	do	All the test specimens satisfy the relevant requirement.

$\bar{X}$ = Average value obtained by dividing the sum of the observed values by the number of test results.

R = Range, that is difference between the maximum and minimum in a set of observed values.

Table 4 Sample Size and Criteria for Conformity
(Clauses 9.3 and 9.4)

Lot Size	Sample Size	Permissible Number of Non-conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)
Up to 5	2	0	1
6 to 20	3	0	1
21 to 50	5	0	2
51 to 150	8	0	3
151 to 300	13	1	5
301 and above	20	1	5

ANNEX A (Clause 2)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
32 : 1971	Code for seaworthy packaging of woollen and worsted yarn and cloth (<i>second revision</i>)	1969 : 1985	Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>)
665 : 1989	Determination of dimensional changes of fabrics containing wool on soaking in water (<i>first revision</i>)	2454 : 1985	Methods for determination of colour fastness of textile materials to artificial light (xenon lamp) (<i>first revision</i>)
686 : 1985	Method for determination of colour fastness of textile materials to daylight (<i>first revision</i>)	3361 : 1979	Method for determination of colour fastness of textile materials to washing : Test 2 (<i>first revision</i>)
741 : 1971	Code for inland packaging of woollen and worsted yarn and cloth (<i>first revision</i>)	3522(Part 3) : 1983	Methods of estimation of common preservatives used in textile industry
1390 : 1983	Methods for determination of pH value of aqueous extracts of textile materials (<i>first revision</i>)	3751 : 1966	Heavy cee cloth
1793 : 1973	Guide for marking textile materials made of wool (<i>first revision</i>)	4125 : 1987	Glossary of terms pertaining to defects in fabrics (<i>first revision</i>)
1954 : 1990	Methods for determination of length and width of fabrics (<i>second revision</i>)	4802 : 1988	Methods for determination of colour fastness of textile materials to dry-cleaning (<i>first revision</i>)
1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)	4905 : 1968	Methods for random sampling
1964 : 1970	Methods for determination of weight per square metre and weight per linear metre of fabrics (<i>first revision</i>)	5911 : 1977	Fineness grades of wool tops (<i>first revision</i>)
		11206 : 1984	Glossary of textile terms — wool and other animal fibres, their processing and products
		11662 : 1986	Preservative treatment of textiles

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